UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,778	07/24/2003	Yoshinari Morimoto	116571	8193

25944 7590 09/15/2005

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER	
HUFFMAN, JULIAN D	

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/625,778	MORIMOTO, YOSHINARI	
	Examiner	Art Unit	
	Julian D. Huffman	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *11 and 12* is/are allowed.

6)☐ Claim(s) *1-3,5,6,10,13,14 and 19-21* is/are rejected.

7)☒ Claim(s) *4,7-9 and 15-18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 15-21 are objected to because of the following informalities:

In line 1 of claims 15 and 19, cartridge should be changed to carriage.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 5, 6, 10, 13, 14, and 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi et al. (U.S. 6,454,390 B1).

With regards to claim 1, Takahashi et al. discloses an ink jet printer, comprising:

a printing unit having a carriage and a print head (fig. 5) in which a plurality of ink jet nozzles are arranged in plural columns (fig. 6b), the printing unit printing on a printing medium while reciprocating the print head by the carriage for go-printing and return-printing (column 39, lines 5-9);

a sensor (fig. 8) disposed on the carriage (column 20, lines 58-60) and having a light-emitting portion (31) for emitting light toward the printing medium and a light-receiving portion (32) for receiving reflected light from the printing medium;

a test pattern printing control unit (fig. 9, elements 100, 150) that causes the printing unit to print a test pattern in which vertical ruled lines are arranged with a prescribed pitch (fig. 37);

a plural patterns printing instructing unit that causes the printing unit to print a plurality of test patterns while changing a test pattern printing interval of the return-printing with respect to the go-printing in plural stages (controller 100, fig. 37, column 39, lines 5-9);

a best pattern detecting unit for scanning-in the printed test patterns with the sensor and for automatically selecting a best test pattern from the scanned-in test patterns (30); and

a best pattern printing instructing unit that causes the printing unit to print information indicating the selected best test pattern on the printing medium (controller, column 41, lines 45-50).

With regards to claim 2, Takahashi et al. discloses that the best pattern printing instructing unit causes the printing unit to print the selected best test pattern on the printing medium at the test pattern printing interval that produces the selected best test pattern as information indicating the selected best test pattern (column 41, lines 45-50).

With regards to claim 3, the best pattern printing instructing unit causes the printing unit to print information indicating a test pattern printing interval that produces the selected best test pattern as information indicating the selected best test pattern (column 41, lines 45-50).

With regards to claim 5, the sensor detects at least one of a front end portion, a rear end portion, and a width portion of the printing medium (since sensor is mounted on carriage it may detect any portion of paper, further as sensor scans, it detects various portions of the paper).

With regards to claim 6, Takashi discloses:

a detection result judging unit for judging whether a detection made by the best pattern detecting unit is appropriate (controller 100, column 17, lines 14-32 and column 33, lines 28-36); and

a re-detection executing unit that causes the printing unit to print the plurality of test patterns again while changing a printing condition and causes the sensor to scan the printed test patterns again when the detection result judging unit judges that the detection made by the best pattern detecting unit is not appropriate (controller 100, column 33, lines 38-43 and column 33, lines 38-43).

With regards to claim 10, Takahashi et al. discloses an ink jet printer, comprising:

a printing unit having a carriage and a print head (fig. 5) in which a plurality of ink jet nozzles are arranged in plural columns (fig. 6b), the printing unit printing on a printing medium while reciprocating the print head by the carriage for go-printing and return-printing (column 39, lines 5-9);

a sensor (fig. 8) disposed on the carriage (column 20, lines 58-60) and having a light-emitting portion (31) for emitting light toward the printing medium and a light-receiving portion (32) for receiving reflection light;

a plural patterns printing instructing unit that causes the printing unit to print a plurality of test patterns in each of which vertical ruled lines are arranged with a prescribed pitch, while changing a test pattern printing interval of the return-printing with respect to the go-printing in plural stages (controller 100, fig. 37, column 39, lines 5-9);

a best pattern detecting unit for scanning-in the printed test patterns with the sensor and for automatically selecting a best test pattern from the scanned-in test patterns (30); and

a best pattern printing instructing unit that causes the printing unit to print information indicating the selected best test pattern on the printing medium (controller, column 41, lines 45-50).

With regards to claim 13, 14 and 19-21, Takahashi discloses that each test pattern has a plurality of first regions and a plurality of second regions, each first region having both a plurality of dots that is printed by go-printing and a plurality of dots that is printed by return-printing, each second region having only a plurality of dots that is printed by one of go-printing and return-printing, a number of the sum of the dots of the first region being equal to a number of dots of the second region (considering the pattern of fig. 37a, a first row of dots of the left segment pattern constitutes a first region, similarly, a last row of dots on the left side segment constitutes another first

region, thus providing a plurality of first regions, each first region has go-printing dots represented by dark dots and return printing dots represented by unfilled dots, a second region is represented by the upper two rows of dots on the right segment pattern, another second region is represented by the lower two rows of dots, each of these dots are printed by only go-printing, the first region of dots, which includes one row, includes 8 dots, while the second region of dots, which includes two rows, includes 8 dots, the claim language does not require the regions to be the same size, a similar interpretation of fig. 37E for example provides a second test pattern, thus satisfying the claim language), the plurality of first regions and the plurality of second regions are disposed alternately on each test pattern (in fig. 37a, the first regions appear on the left segment, while the second regions appear on the right segment, as such, the regions alternate in the main scanning direction, similarly in fig. 37e, the first regions are on the right segment while the second regions are on the left segment and the regions thus alternate).

Allowable Subject Matter

4. Claims 4 and 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11 and 12 allowable.

Claims 15-18 would be allowable if rewritten to overcome the objection outlined in paragraph 1 above.

Response to Arguments

5. Applicant's arguments filed 8 July 2005 have been fully considered but they are not persuasive.

Applicant's argument that Takahashi fails to disclose a best test pattern printing instructing unit that causes the printing unit to print information indicating the selected best test pattern is noted, however, this argument is clearly not persuasive. Takahashi prints test patterns, selects the optimal/best one automatically using a sensor, and then prints the pattern again so that a user may confirm the success of dot alignment. Applicant's arguments are not entirely clear; applicant seems to suggest that Takahashi does not print the selected best pattern since the user must first confirm the test pattern before it may be determined to be the best test pattern. This argument is not persuasive since the automatic selection selects the best test pattern even without the users confirmation. Applicant further states that Takahashi does not solve the problem of an inspector not being able to recognize which pattern is the optimum pattern that has been set automatically. This statement is clearly erroneous, as this is the advantage which Takahashi clearly and obviously provides.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (571) 272-2147. The examiner can normally be reached on 9:30a.m.-6:00p.m. Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Julian D. Huffman
8 September 2005

K. FEGGINS 9/05
PRIMARY EXAMINER